UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
ENVIRONMENTAL
CLEANUP

MEMORANDUM

DATE: September 19, 2016

SUBJECT: Draft Source Control Decision
Fred Devine Diving and Salvage Company
ECSI #2365
August 24, 2016

FROM: Eva DeMaria, Remedial Project Manager

TO: Alex Liverman, Project Manager
Oregon Department of Environmental Quality

Following are the United States Environmental Protection Agency's (EPA) comments on the August 24, 2016 Draft Source Control Decision (SCD) for the Fred Devine Diving and Salvage Company (site) located at 6211 N. Ensign St., Portland, Oregon. The property is listed in the Oregon Department of Environmental Quality (ODEQ) Environmental Cleanup Site Information (ECSI) as ECSI #2365 with a low priority pending effectiveness of Best Management Practices (BMP) for stormwater. The draft SCD was prepared by ODEQ based on information presented in five documents provided by Fred Devine Diving and Salvage Company including a 2001 preliminary assessment, a 2002 subsurface soil and catch basin debris sampling report, a 2003 revised subsurface soil and catch basin debris sampling report, a 2008 stormwater report and stormwater source control evaluation, and a 2010 supplement to stormwater source control evaluation. EPA's review of source control documents comprised of the following:

- Oregon Department of Environmental Quality, 2016, Draft Source Control Decision, Fred Devine Diving and Salvage Company, ECSI #2365, August 24, 2016
- Evren Northwest, 2008, Technical Memorandum, Storm Water Source Control Evaluation, Fred Devine Diving and Salvage Co. 6211 N. Ensign Street, Portland, Oregon, August 13, 2008
- Evren Northwest, 2008, May 2010 Supplement to Storm Water Source Control Evaluation, Fred Devine Diving and Salvage Co. 6211 N. Ensign Street, Portland, Oregon, October 20, 2010

The site is located on the east bank of the Swan Island Lagoon (Basin) area of the Willamette River at approximately River Mile 8.4 E across from the Vigor Shipyard. Stormwater from the site drains to a single line to the City of Portland stormwater conveyance, which comingles with stormwater from other property contributions and eventually discharges to the Willamette River at City of Portland Outfall M-1.

The SCD concludes that this upland site is adequately characterized to support a source control decision and source control measures are not warranted. The SCD also concludes that the property does not appear to be a current or reasonably likely future source of contamination to the Willamette River,

provided that releases continue to be prevented and infiltration of the majority of site stormwater continues. EPA generally agrees with the SCD provided existing SCMs continue to be implemented and maintained at the site, and additional monitoring is conducted to confirm effectiveness of these SCMs.

Primary Comments

1. Individual polycyclic aromatic hydrocarbons (PAHs) and metals were detected in stormwater solids (samples collected in 2002 and 2010) at concentrations exceeding preliminary remediation goals (PRGs) established in the Portland Harbor feasibility study (FS) for the sediment pathway based upon remedial action objective (RAO) 9. Although total PCBs were not detected, the laboratory reporting limit exceed the PRG by six to 55 times. Ongoing BMPs are recommended to prevent PAHs and metals from migrating to the Willamette River at concentrations that pose a risk to human health or the environment.
2. The August 2016 SCD states that management of stormwater discharges includes capture of stormwater sediments in catch basins equipped with filter inserts. Based on the detections of stormwater sediment PAHs and metals concentrations above RAO 9 PRGs, these source control measures should be regularly inspected and maintained to adequately retain stormwater sediments onsite and prevent recontamination of the in-water sediment remedy.
3. Stormwater sampling conducted in 2007, 2008 and 2009 showed total copper, total lead, total zinc, bis(2-ethylhexyl) phthalate (BEHP), and other PAHs above PRGs and/or SLVs. EPA concurs with DEQ's observation that "nearly all detections were below the flat part of the rank-order curves for those metals, bis(2-ethylhexyl)phthalate or total PAHs. One sample in 2007 had total PAHs in the low knee of the curve and one sample in 2009 had zinc in the knee of the curve". Although the concentrations are generally at the low end of the rank-order curves, the PRGs exceedances indicate the need for ongoing monitoring.
4. EPA recommends continued stormwater sampling, following DEQ's JSCS guidance, followed by a SCM effectiveness evaluation before issuance of an SCD. The data generated is intended to provide for a defensible decision that control of potential stormwater sources have been demonstrated. The 2007 and 2008 stormwater sampling did not comply with the Portland Harbor Joint Source Control Strategy (JSCS) guidelines, and therefore, data generated from these events may not be sufficient for determining whether the stormwater pathway is a current or future contamination source to the Willamette River. The JSCS guidance (Section D.5) states that a minimum of four storms be sampled for screening purposes. Of these four stormwater sampling events, the JSCS recommends that two be representative of "first flush" conditions (i.e. within the first 30 minutes of stormwater discharge) and the other two events should be collected within the first three hours of stormwater discharge. From the hydrographs in the stormwater reports and the description of stormwater sampling in the text, it appears that stormwater sampling did not occur within the first three hours of stormwater discharge. Pollutant concentrations can vary significantly over the course of a stormwater runoff event, and the data collected may not be representative of typical stormwater discharges leaving the site. The stormwater samples from 2007 and 2008 were collected 3 to 18.5 hours after the onset of

precipitation, and stormwater sample collection in 2009 did not include an adequate antecedent dry period. The analyte suite should include PCBs with a laboratory reporting limit that can allow for comparison to PRGs established for RAOs 3 and 7 in the Portland Harbor FS.

To Be Considered Comments

1. Several of the remedial alternatives evaluated in the Portland Harbor FS, including EPA's preferred Alternative I, rely on enhanced natural recovery offshore of the site. Alternatives F, G, and H rely on capping and dredging. The contaminant driving risk in the Swan Island lagoon is PCBs, and the site is likely not a significant source of PCB contamination to the Willamette River. EPA notes the site is also not a property with a known contaminated riverbank.

EPA Site Status Summary – Fred Devine Diving and Salvage Company

Question	Answer	Description
Are source control measures (SCMs) being implemented?	Yes	ODEQ concluded that the property does not appear to be a current or reasonably likely source of contamination to the Willamette River and that adequate stormwater source control measures are in place and maintained at the site.
Are there JSCS SLV exceedances?	Yes	Polycyclic aromatic hydrocarbons exceeded JSCS SLVs (anthracene, fluoranthene, fluorene, phenanthrene, pyrene and bis(2ethylhexyl)phthalate [BEHP]) in solids from one or more catch basins. Metals also exceeded JSCS SLVs (cadmium, chromium [total], copper, lead, zinc) in solids from one or more catch basins. Several polycyclic aromatic hydrocarbons and BEHP exceeded JSCS SLVs in stormwater. Metals also exceeded JSCS SLVs (cadmium, copper, lead, zinc) in stormwater.
Are there stormwater PRG exceedances?	Yes	BEHP, fluoranthene, benzo(a)anthracene, chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo(a)pyrene were detected in surface water above RAO 3 PRGs. BEHP, benzo(a)anthracene, benzo(a)pyrene, and copper were detected in stormwater above RAO 7 PRGs. Total and dissolved arsenic and BEHP were detected in surface water above RAO 3 PRGs. Total and dissolved lead was detected in stormwater above RAO 8 PRGs.
Are pollutant concentrations typical of Portland Harbor industrial	Yes	Per DEQ, three of the four 2007-2008 measurements of total suspended solids (ranging from 16 to 69 mg/L) falling below the flat portion of the rank-order curve, with one falling in the low knee of the curve. Nearly all stormwater detections were below the flat part of the rank-order curves for those metals,

Question	Answer	Description
sites (e.g. below the knee of the curve)?		BEHP, or total PAHs. One sample in 2007 had total PAHs in the low knee of the curve and one sample in 2009 had zinc in the knee of the curve. All pollutant concentrations presented are at or below the knee of the curve. Note: charts only presented for analytes with JSCS SLV exceedances.
Are stormwater COCs from this site the same as those defined for the associated SDU?	No/uncertain	Stormwater from the site discharges to City of Portland outfall M-1, which discharges to Portland Harbor sediment decision unit (SDU) Swan Is. SDU Swan Is. has PCBs as a focused contaminant of concern (COC). Total PCBs are not likely stormwater COCs at the Fred Devine Diving and Salvage Company site. Stormwater samples from the site were not analyzed for total PCBs. Catch basin solids were analyzed for total PCBs. Total PCBs were not detected; however, the detection limit exceeded the Portland Harbor total PCB PRG by 6 to 55 times.
Do sampled stormwater events meet JSCS criteria?	No	Stormwater sampling was not conducted in accordance with ODEQ guidance. See Primary Comment #4.
Is further stormwater data collection recommended?	Yes	Additional stormwater sampling is required to comply with ODEQ guidance and confirm through ongoing monitoring that the site is not a source of contamination to the Willamette River.
Are additional SCMs recommended?	To be determined	Contingent upon results of additional stormwater quality data collected in accordance with ODEQ guidance.